

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2004/051643A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B01F5/00 F04B53/16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B01F F04B F04C F02M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 6 305 265 B1 (BINGHAM DENNIS N ET AL) 23 October 2001 (2001-10-23) column 3, line 38 - column 11, line 22; figures 1-5	1 2-18
X	US 6 162 031 A (TREMOULET JR OLIVIER L) 19 December 2000 (2000-12-19) column 2, line 21 - column 4, line 29; figures 1,2,5	1
A	EP 1 284 367 A (TOYOTA MOTOR CO LTD ; DENSO CORP (JP)) 19 February 2003 (2003-02-19) paragraph '0013! - paragraph '0022!; figure 1	1-18
A	US 4 233 886 A (BALZANO LUCIEN D ET AL) 18 November 1980 (1980-11-18) abstract; figure 1	1-18

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

13 December 2004

Date of mailing of the international search report

21/12/2004

Name and mailing address of the ISA

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Muller, G

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Information on patent family members

International Application No.

PCT/IB2004/051643

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6305265	B1	23-10-2001	NONE
US 6162031	A	19-12-2000	NONE
EP 1284367	A	19-02-2003	JP 2001295728 A 26-10-2001 EP 1284367 A1 19-02-2003 US 2003136260 A1 24-07-2003 CN 1437687 T 20-08-2003 WO 0179698 A1 25-10-2001
US 4233886	A	18-11-1980	FR 2399593 A1 02-03-1979 DE 2833139 A1 15-02-1979 GB 2012021 A ,B 18-07-1979 JP 61204979 U 24-12-1986 JP 54026506 A 28-02-1979

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VIII-3-1	Declaration: Entitlement to claim priority Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application specified below, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(iii) and 51bis.1(a)(iii)) Name	in relation to this international application GRANDI, Simone is entitled to claim priority of earlier application No. PR2004A000031 by virtue of the following:
VIII-3-1(i))		the applicant is the inventor of the subject matter for which protection was sought by way of the earlier application
VIII-3-1(i))		the applicant is the inventor of the subject matter for which protection was sought by way of the earlier application
VIII-3-1(i) x)	This declaration is made for the purposes of:	US

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VIII-3-2	Declaration: Entitlement to claim priority Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application specified below, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(iii) and 51bis.1(a)(iii)) Name	in relation to this international application GANDINI, Marco is entitled to claim priority of earlier application No. PR2004A000031 by virtue of the following:
VIII-3-2(i)		the applicant is the inventor of the subject matter for which protection was sought by way of the earlier application
VIII-3-2(i)x)	This declaration is made for the purposes of:	US

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VIII-2-1	Declaration: Entitlement to apply for and be granted a patent Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent (Rules 4.17(ii) and 51bis.1(a)(ii)), in a case where the declaration under Rule 4.17(iv) is not appropriate: Name (LAST, First)	in relation to this international application NIRO-SOAVI S.p.A. is entitled to apply for and be granted a patent by virtue of the following:
VIII-2-1(i) i)		NIRO-SOAVI S.p.A. is entitled as employer of the inventor, GANDINI, Marco
VIII-2-1(i) i)		NIRO-SOAVI S.p.A. is entitled as employer of the inventor, GRANDI, Simone
VIII-2-1(i) x)	This declaration is made for the purposes of:	all designations except the designation of the United States of America

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VIII-4-1	<p>Declaration: Inventorship (only for the purposes of the designation of the United States of America) Declaration of Inventorship (Rules 4.17(iv) and 51bis.1(a)(iv)) for the purposes of the designation of the United States of America:</p>	<p>I hereby declare that I believe I am the original, first and sole (if only one inventor is listed below) or joint (if more than one inventor is listed below) inventor of the subject matter which is claimed and for which a patent is sought.</p> <p>This declaration is directed to the international application of which it forms a part (if filing declaration with application).</p> <p>I hereby declare that my residence, mailing address, and citizenship are as stated next to my name.</p> <p>I hereby state that I have reviewed and understand the contents of the above-identified international application, including the claims of said application. I have identified in the request of said application, in compliance with PCT Rule 4.10, any claim to foreign priority, and I have identified below, under the heading "Prior Applications", by application number, country or Member of the World Trade Organization, day, month, and year of filing, any application for a patent or inventor's certificate filed in a country other than the United States of America, including any PCT international application designating at least one country other than the United States of America, having a filing date before that of the application on which foreign priority is claimed.</p>
VIII-4-1-1	Prior applications:	PR2004A000031, IT, 09 April 2004 (09.04.2004)

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		<p>I hereby acknowledge the duty to disclose information that is known by me to be material to patentability as defined by 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the PCT international filing date of the continuation-in-part application. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.</p>
VIII-4-1-1-1	Name (LAST, First)	GANDINI, Marco
VIII-4-1-1-2	Residence: (city and either US State, if applicable, or country)	PARMA, Italy
VIII-4-1-1-3	Mailing address:	Via Berzioli, 2 I-43100 PARMA Italy
VIII-4-1-1-4	Citizenship:	IT
VIII-4-1-1-5	Inventor's Signature: (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)	/M. GANDINI/
VIII-4-1-1-6	Date: (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)	31 August 2004 (31.08.2004)

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VIII-4-1-2-1	Name (LAST, First)	GRANDI, Simone
VIII-4-1-2-2	Residence: (city and either US State, if applicable, or country)	SALA BAGANZA (PARMA), Italy
VIII-4-1-2-3	Mailing address:	Via Campi, 10 I-43038 SALA BAGANZA (PARMA) Italy
VIII-4-1-2-4	Citizenship:	IT
VIII-4-1-2-5	Inventor's Signature: (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)	/S. GRANDI/
VIII-4-1-2-6	Date (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)	31 August 2004 (31.08.2004)